

CLAIMS

Please enter the following claim amendments.

1. – 38. (cancelled)

39. (previously presented) An annular prosthesis for a heart valve comprising a chain having a plurality of links, wherein upon implantation, the prosthesis can reinstate the proper shape and dimensions of the valve annulus, the prosthesis implanted without necessity of suture stabilizers or placation bands.

40. (previously presented) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis generates a saddle-shaped geometry and deforms three-dimensionally, while retaining an approximately constant three-dimensional perimeter.

41. (previously presented) The annular prosthesis of Claim 40, wherein upon implantation, the prosthesis has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 1/3.

42. (previously presented) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis retains an approximately constant three-dimensional perimeter, with a maximum variation in perimeter of less than approximately 10%.

43. (previously presented) The annular prosthesis of Claim 42, wherein the maximum variation in perimeter is less than approximately 3%.

44. (previously presented) The annular prosthesis of Claim 39, wherein upon implantation, the prosthesis maintains a normal chordal force distribution as its bending is dominated by its mechanical environment.

45. (previously presented) An annuloplasty ring for a heart valve comprising a prosthesis, wherein upon implantation, the prosthesis maintains a normal chordal force distribution during the cardiac cycle as its bending is dominated by its mechanical environment.

46. (previously presented) An annuloplasty ring for a heart valve comprising a prosthesis, wherein upon implantation, generates a saddle-shape geometry, and deforms three-dimensionally, while retaining an approximately constant three-dimensional perimeter.

47. (previously presented) The annuloplasty ring of Claim 46, wherein the prosthesis has a saddle height to commissural diameter ratio in the range from approximately 0 to approximately 33%.

48. (previously presented) The annuloplasty ring of Claim 47, wherein the prosthesis has a saddle height to commissural diameter ratio of approximately 25%.

49. (previously presented) A supporting prosthesis for repairing pathological alterations of valves of the heart comprising:

a chain having a plurality of links;

shaping means, wherein upon implantation to annulus tissue, the chain generates a variable saddle-shaped geometry during the cardiac cycle, and deforms three-dimensionally, to reconstruct the shape of a valve, while maintaining the dynamics of the valve through appropriate flex and bend as to allow the valve to thereafter function correctly.

50. (previously presented) The supporting prosthesis of Claim 49, wherein upon implantation, the chain maintains a normal chordal force distribution as its bending is dominated by its mechanical environment.

51. – 60. (cancelled)